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PATENT SPECIFICATION

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PROVISIONAL SPECIFICATION

Improvements in or relating to Gas-operated Automatic Firearms

We, THE BIRMINGHAM SMALL ARMS COMPANY LIMITED, a company incorporated under the laws of Great Britain, of Armoury Road, Small Heath, Birmingham, HENRY ALEXANDER FAULKNER and ROGER DAVID WACKROW, both British subjects, of the said Company's address, do hereby declare the nature of this invention to be as follows:—

This invention relates to gas-operated automatic firearms, and refers more particularly to an improved construction and arrangement of built up piston and piston extensions adapted to be slidably mounted in a gas block or cylinder and in the breech casing of the firearm, and also adapted to be actuated by the explosive gases whereby longitudinal movement is imparted to the piston and its extensions, said movement being arranged to effect the unlocking of the breech mechanism, the opening movement of the breech block, extraction and ejection of the spent cartridge, and compression of a driving or return spring or springs in which energy is thus conserved and adapted to effect the return or closing movement of the breech block and movement of a fresh cartridge from the magazine into the breech chamber of the firearm, and the locking of the breech mechanism.

The object of the invention is to provide an improved or simplified construction of piston and piston extensions for use in a gas-operated gun of the aforesaid kind, which are easy and cheap to manufacture and strong and reliable in operation.

A further object is to provide means whereby the driving or return spring and a buffer spring are mounted in the piston extensions and adapted to be connected to and supported by the breech body.

The invention consists in the provision and use of a piston and piston extensions, built up from a number of parts, comprising a pair of side members shaped and adapted to have fixed between the front ends thereof a piston extension on the front end of which is fitted or formed a piston head, and between the rear ends a striker post and a locking cam, said side members having formed in their inner faces, at the rear ends thereof, inclined slots for engagement with a vertically slidable locking wedge which is adapted in known manner to lock the breech block in its closed position.

The invention further consists in the provision of means whereby a driving or return spring and a buffer spring are carried in the piston extension and connected to and supported directly by the breech body.

According to one convenient mode the piston rod or extension is of tubular formation to receive the driving spring and its guide rod, and on the front end thereof is fitted a piston head, while its rear end is enlarged and of rectangular shape in cross section and has formed on the sides thereof vertical ribs or projections for engagement with corresponding grooves in the side members, as hereinafter described, and has also formed therein transverse holes to receive rivets for the attachment of the said side members.

The side members adapted to be attached to the right and left hand sides of the piston rod or extension, may be conveniently produced from bars of rectangular cross section, said bars having formed in their opposing faces, at the front ends thereof, vertical grooves to receive the vertical ribs on the rear end of the piston rod or extension, and transverse holes, corresponding to the holes in the said piston rod or extension to receive attachment rivets whereby the said parts can be securely fixed together.

On the inner faces of the aforesaid right and left hand side members, near the rear end thereof, are formed vertical slots arranged to receive and engage with a striker post, the said slots and striker post having formed therein correspondingly disposed holes to receive rivets for securely fixing together the said parts. Between the inner faces of the aforesaid right and left hand side members, at the outer end thereof, is fixed by rivetting a locking cam, the upper face of which is arranged to engage with and lift a vertic-

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